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THE COLLEGE STANDARDS AND ACCREDITATION COUNCIL:
A Discussion Paper of the CSAC Establishment Board

March 1992

Richard Johnston and Bernard Shapiro, co-chairs



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March 1992

Dear Reader,

In its report titled **Quality and Opportunity**, Vision 2000 offered a wide range of proposals for how Ontario's college system might meet the challenges of moving into the twenty-first century. In endorsing the recommendation of Vision 2000 for the development of a College Standards and Accreditation Council (CSAC) the Government of Ontario created the CSAC Establishment Board to provide the Minister of Colleges and Universities with advice on how CSAC should be implemented.

Continuing the process of wide consultation exemplified in Vision 2000, this discussion paper presents, for your consideration and response, the Establishment Board's proposals for CSAC. We look forward to reading your responses and to discussing this paper with many of you in the weeks ahead. We would appreciate written submissions not later than May 8, 1992.

We believe that the proposed College Standards and Accreditation Council can be a focal point for fostering excellence in programming in Ontario colleges. If CSAC is to succeed, it will be because, collectively, we work for its success.

Let us begin by ensuring that the CSAC we create is a CSAC which will meet the needs of both internal and external constituencies to our college system. Toward this end, we welcome your responses to this paper.

Sincerely,

Richard Johnston
Chair
Council of Regents

Bernard Shapiro
Deputy Minister
Colleges and Universities

Co-Chairs, CSAC Establishment Board



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Table of Contents

Introduction: The Establishment Board and Guide to the Paper	1
Section I: Mandate of CSAC	5
A. Declarations	5
B. Discussion of Jurisdiction	6
Section II: Functions of CSAC	8
A. Program Standards	9
1. Program Standards Documents	9
2. Vocational Outcomes	10
3. Generic Skill Outcomes	11
4. General Education	12
B. Program Review	17
1. Program Review Framework	18
2. Vocational Skills	21
3. Generic Skill Outcomes	21
4. General Education	22
C. Credentials	22
D. Assessment and Remediation	23
Section III: Structure and Relationships	25
A. Internal Structure	25
B. External Relationships	30
Section IV: Implementation and Costs	33
A. Priorities	33
B. Staging	34
C. Pilot Projects	34
D. Notes on Costs	36
E. Conclusion	38
Section V: Questions for Responding to Discussion Paper	39

Table of Appendices

Appendix A:

Members of the CSAC Establishment Board	41
---	----

Appendix B:

CSAC Establishment Board Terms of Reference	42
---	----

Appendix C:

Tables	46
--------	----

Appendix D:

Generic Skills: The BTEC Model	48
--------------------------------	----

Appendix E:

The New Jersey General Intellectual Skills (GIS) Assessment: A Summary	52
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Introduction: The CSAC Establishment Board and Guide to the Paper

In May 1990, the Council of Regents forwarded the final report of Vision 2000 - **Quality and Opportunity** - to the Minister of Colleges and Universities. The report on the province's twenty-three community colleges contained forty recommendations covering a wide variety of issues. Among the most important of the initiatives were those related to enhancing the quality of programs offered by the college system. Four specific recommendations were offered:

There should be a significant increase in the generic skills and general education content of programs leading to a college credential to ensure an equivalence of learning outcomes between these components and specific occupational skills. (Recommendation #2)

There should be system-wide standards for all programs leading to a college credential. Such standards must focus on the learning outcomes expected of graduates from a program. (Recommendation #3)

All programs leading to a college credential should be subject to regular, system-wide program review for the purposes of accreditation. (Recommendation #4)

A College Standards and Accreditation Council (CSAC) should be established, with participation of internal and external stakeholders and with executive authority in the areas of system-wide program standards, review and accreditation. (Recommendation #5)

Some of the goals underlying these recommendations were the following:

- (a) to enhance both the quality of and respect for a college credential and to assure a common meaning for credentials;
- (b) to increase the emphasis on generic skills in order that graduates of all college programs be able to exhibit the skills necessary not only to perform a particular job, but to engage in additional education and training as required and desired;
- (c) to increase the emphasis on general education in order to increase college graduates' understanding of themselves and their society, to enhance their abilities to formulate and achieve personal goals and to enhance their abilities to function effectively as members of society;

- (d) to ensure consistency through the application of system-wide standards and program review, applying to all similar programs regardless of where they are offered, how they are organized (full- or part-time) and how they are delivered;
- (e) to ensure that standards are current, appropriate to employers and learners, and to ensure that they are being met;
- (f) to establish processes for developing system-wide standards and conducting program review that do not lead to standardization; each college will determine specific curricula and modes of delivering programs and the mix of offerings available to learners;
- (g) to facilitate lifelong learning by allowing students to accumulate and transfer credits between part-time and full-time programs, between programs and/or institutions without significant loss of credit, thereby promoting accessibility;
- (h) to provide, through CSAC, the means by which the college community can assume ownership of quality on a system-wide basis and exercise its responsibilities in partnership with relevant stakeholders.

Following initial examination of the recommendations, the Minister determined in January 1991 that the Council of Regents should convene an advisory committee to examine some of the issues which would arise in pursuing a College Standards and Accreditation Council. Following the meetings of this committee in the Winter and Spring of 1991, the Treasurer of Ontario announced, in the April 1991 Budget, the Government's commitment to proceed with CSAC. In September 1991, the Minister announced the creation of a CSAC Establishment Board to be co-chaired by the Deputy Minister of Colleges and Universities and the Chair of the Council of Regents, and to include representatives of the major college constituencies, Council of Regents, Ministry of Colleges and Universities and members external to the colleges.¹ The Minister's announcement and terms of reference² for the Establishment Board request that the Board submit its advice by June 1992.

The Establishment Board held its first meeting on November 4, 1991, and concluded early in its deliberations that it would benefit from the input of the college community, broadly defined to include both internal and external stakeholders. This discussion paper is one vehicle toward this end. In

¹ A list of Establishment Board members is found in Appendix A.

² Attached to this discussion paper as Appendix B.

addition, the members of the Establishment Board have sought the views of their constituencies on the major issues facing CSAC.

At the seven meetings to date, the Establishment Board has examined a variety of documents, including those prepared for the COR advisory committee and those prepared by the Board secretariat. The Board has discussed the issues of a mandate and functions for CSAC, general education and generic skills, program standards and program review. In the course of its deliberations, the Establishment Board attempted, wherever possible, to reach consensus in an effort to present a discussion of how CSAC might address the major issues of interest to both members of the Board and many within the college community. While the Board initially felt that the discussion paper might present alternative models of CSAC, its conclusions on many of the issues has led to the presentation of a single view of CSAC and how it might operate to fulfill its mandate. The discussion paper does, however, attempt to provide an account of the main lines of discussion and rationales for the Establishment Board's perspective.

The discussion paper is divided into five sections. Section I proposes a mandate for CSAC in the form of five declarations, followed by some notes of clarification of the first declaration on CSAC's jurisdiction. Section II elaborates on the other declarations in discussing the principal functions of CSAC: setting program standards and overseeing program review, and includes the Establishment Board's perspective on the central issues of general education and generic skills. Section III outlines the internal structure of CSAC as well as its relationships with its major constituencies and external bodies. Section IV provides some preliminary understanding of CSAC's priorities, the staging of implementation, pilot projects and some costs associated with CSAC. A final section summarizes the questions which the Establishment Board feels are most necessary for the college community to address.

At the time of writing this discussion paper, two additional factors have been understood to have potential impact on the implementation of CSAC. The recommendation in Vision 2000 to provide a significant increase in general education and generic skills represents a major re-orientation of college programs with which the Establishment Board concurs. However, in discussing how to implement this and other commitments, the Board has attempted to consider the extent of financial constraint the government and the colleges must face. The Establishment Board considers its task to include the need to provide the Minister with advice about how CSAC can be implemented and meet its mandate in the most efficient way possible.

A second, and related factor, is the government's commitment to proceed with the Ontario Training and Adjustment Board (OTAB). This body represents a joint initiative of labour and management to organize and

augment the educational and training activities offered by a variety of providers, under the auspices of both Federal and Provincial governments, to meet the many and diverse needs of the residents of Ontario. The colleges have historically played an important role in the delivery of a wide variety of adult education and training programs. For this role to continue to grow, especially in light of expenditures which may not grow, the college system must be able to demonstrate its ability to provide programs of the highest quality. The potential benefits of establishing CSAC may therefore be considerable for the well-being of the colleges and their ability to serve the needs of our labour force, both present and future.

These are clearly difficult and challenging times, and not only for the colleges. Realizing the title of the Vision 2000 report -- **Quality and Opportunity** -- will not be easy. The Establishment Board considers CSAC an important element, and we have tried to provide an outline of both what CSAC can be and how we might realistically proceed, cognizant of the difficulties to be faced. It is our hope, therefore, that readers will consider this paper carefully and respond thoughtfully to the directions proposed.

There are three principal means by which the Establishment Board is seeking responses to this discussion paper. First, a meeting with one of the Establishment Board co-chairs has been scheduled at each of the twenty-three colleges in April and early May at which time individuals from across the college are invited to speak directly to the issues raised in this paper. Second, the Board will explicitly seek the responses of a range of external groups, including those which currently have formal responsibility for accrediting specific college programs. Third, individuals and groups, both internal and external to the colleges, are invited to respond in writing to the issues raised in the discussion paper. These responses should be received, not later than Friday, May 8, 1992, by:

CSAC Establishment Board
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790 Bay Street
Toronto, Ontario
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Section I: Mandate of CSAC

I.A. Declarations

1. CSAC SHALL have the authority to define (non-degree) credentials for, set standards for and accredit publicly-funded college programs.
2. CSAC SHALL have the authority to approve for each program a system-wide program standards document which will specify learning outcomes for both generic skills and program-specific vocational skills, and any specific admission requirements.
3. CSAC shall have the authority to define general education and to require that each college credential include a defined proportion of general education.
4. CSAC SHALL oversee system-wide program review. Each program will be reviewed regularly. The purposes of program review will be to determine (1) the extent to which program outcomes which have been established have been achieved by students and (2) the appropriateness of program outcomes. Following the system-wide review of a program, CSAC will determine whether the program will continue to be accredited at a college and any conditions which might apply. The accreditation status of the program will be publicly reported.
5. CSAC SHALL operate in an open and democratic manner, with an equal number of representatives from both external stakeholders and internal members of the college community.

Are there other matters which should be included in CSAC's mandate?

I.B. Discussion of Jurisdiction

The first declaration reflects the opinion of the Establishment Board that CSAC should have jurisdiction over all publicly-funded college programs. Publicly-funded programs offered in colleges include:

- post-secondary (including one year certificate, two and three year diploma, and post-diploma programs);
- adult training (including those purchased directly by the federal and provincial governments and indirectly by the federal government);
- adult basic education including English as a Second Language, Ontario Basic Skills and FUTURES Pre-employment programs;
- in-school portion of apprenticeship training;
- Trades Updating and Technician and Technologist Updating.

The Board considered alternative mandates for CSAC including

- limiting CSAC's jurisdiction to post-secondary programs, or
- expanding CSAC's jurisdiction to all programs regardless of source of funding.

In support of restricting CSAC's mandate to post-secondary programs, the Establishment Board has noted that setting standards for and accrediting post-secondary programs is a large and complex task in itself. The quality of CSAC's work could suffer if its resources were spread too thinly. Overall investment and (full-time equivalent) enrolments in non-post-secondary programs are smaller than in post-secondary programs, and, because of the variety of program types and funding sources, the complexity of CSAC's task will likely be greater for these programs.

However, the Board believes that there is as much concern for the quality of non-post-secondary programs (from students, faculty, funders and employers) as there is for the quality of post-secondary programs. Since these programs and the people they serve are as important to Ontario as are the post-secondary students and programs, the Board is of the opinion that CSAC should concern itself with all publicly-funded post-secondary and non-post-secondary programs. The proposed Ontario Adjustment and Training Board might assume responsibility for all non-post-secondary programs. CSAC will coordinate its efforts with OTAB.

The Board believes that it is not necessary, and that it might be counter-productive, to require that CSAC standards apply to programs which colleges offer under contract to private sector purchasers. Colleges should be free to negotiate customized training agreements with private purchasers on terms which are mutually agreeable. (Under certain circumstances, such programs may be considered by CSAC for accreditation.) Private purchasers also would be free to purchase programs which have been accredited by CSAC and, therefore, these privately-sponsored students would be eligible to receive the same credential awarded to provincially-funded students.

The inclusion of publicly-funded, non-post-secondary programs significantly increases the number of programs under CSAC's jurisdiction. With limited resources, CSAC will have to establish priorities and schedule its work over a number of years. The questions of priorities and scheduling are examined in Section IV of this paper.

Do you agree with the Establishment Board's proposal that CSAC should have jurisdiction over all publicly-funded programs? Why or why not?

Section II: Functions of CSAC

CSAC is intended to have two main functions: (i) developing and setting standards for the programs under its jurisdiction which will apply system-wide, and (ii) reviewing and accrediting programs to ensure that the standards are appropriate and that they are being attained by students.³ Each of these is discussed in this section.

Included in the broad framework set out in Vision 2000 is the principle that CSAC's standards be as enabling as possible. The intent has always been to avoid, wherever possible, unnecessary intrusion into college decision-making regarding specific curriculum and delivery. Rather, the goal of establishing system-wide outcome standards is to attempt, on a province-wide basis, to ensure similar outcomes for similar college programs, including vocationally-specific and generic skill outcomes and general education content, and to assure the public that these standards are being attained. The Establishment Board reaffirms this view and is proposing in this discussion paper that the colleges continue to meet local needs through their responsibilities for curriculum and delivery of system-wide outcomes.

Section II.A. outlines the Establishment Board's discussions and conclusions:

- (1) regarding information to be included in program standards documents;
- (2) that most, but not all, program-specific vocational outcomes, will be determined by program councils while leaving some to be set by individual colleges to meet local needs;
- (3) that minimum generic skill outcomes will be developed for each level and type of credential; and
- (4) that students will be exposed to general education according to a set proportion of program hours.

³ By appropriate we mean not only that standards are current, but also that they are relevant and meet the needs of both employers and students. In addition, assessing the appropriateness of outcomes may include an evaluation of whether particular learning outcomes are given sufficient emphasis or whether, for example, employers or graduates see the need for greater or lesser emphasis among the approved learning outcomes. By attainment, we mean not the assessment of individual students, but that through program review, a variety of indicators will assure that students, as a group, are attaining the outcomes, and also provide information on how outcomes are achieved and measured by colleges.

II.A. Program Standards

II.A.1. Program Standards Documents

For each similar program under CSAC's jurisdiction, a system-wide program standards document will be developed. Given the large number of programs in the system and the financial constraints that CSAC must operate within, the Establishment Board proposes that this process take place over a period of time (see Section IV.A. - Priorities).

Included within the program standards document will be statements of system-wide vocational learning outcomes to be achieved by students on graduation from the program, the minimum generic skill outcomes which have been established for this level and type of credential, and any generic skill outcomes beyond the minimums established. The document will also indicate the amount of general education which has been specified for this level of credential.

As well, program standards documents will specify system-wide program eligibility requirements, that is, the level of secondary school credits required (basic or general) and any specific secondary school courses, for example, grade 12 English or grade 10 mathematics, needed for admission to the program. The intention here is to ensure that such eligibility requirements will be reasonable and consistent on a system-wide basis for all similar programs.

In addition to the system-wide program standards document, each college will develop and submit to CSAC any additional learning outcomes which have been established to meet local needs. Each college will also indicate how the general education requirement will be met and how generic skill outcomes will be incorporated into the program, whether taught in discrete courses or integrated with vocational learning outcomes.

Once a program standards documents has been approved, it will be used in the following ways:

- by college faculty and program administrators to plan the delivery of the program and to develop detailed curriculum,
- as a basis for review of college programs.

In addition, program standards documents may be used:

- by colleges and secondary schools to provide better information and guidance to students about college programs (including the admission requirements for specific programs),
- by colleges as a basis for negotiating laddering or articulation arrangements with schools and universities,
- by those involved in prior learning assessment, as a benchmark against which an individual's skills and knowledge can be assessed,
- by individual employers, unions or organizations to plan their own training programs to augment the skills and knowledge of college graduates

CSAC will monitor programs and, when necessary, consider changes to the program standards document prior to program review (for example, should changes in technology require an immediate change in statements of learning outcomes). We are distinguishing here between particular changes that may be required on an ongoing basis as opposed to the changes that may be the result of recommendations following the normal cycle of program review.

II.A.2. Vocational Outcomes

Both vocational outcomes and generic skill outcomes will be expressed as learning outcomes in such a way that (i) they can be meaningfully reviewed with respect to their appropriateness and achievement, and (ii) they do not dictate specific curricula and/or methods of delivery to the individual colleges. **Learning outcomes will be expressed as statements of knowledge, skills, and abilities students will possess on graduation from a specific program.**⁴

In some emerging areas, such as environmental studies, and international business, an initial priority for CSAC will be to identify those programs with essentially similar objectives. This rationalization of program titles is consistent with CSAC's objective of setting common standards for essentially similar programs. It should be done jointly by CSAC and MCU in consultation with the appropriate college operating group (e.g. Heads of Business).

⁴ In many sections of this paper, the term 'outcomes' is used synonymously with 'learning outcomes'.

Any generic skill outcomes deemed appropriate for a specific program which go beyond the minimums established for each level of credential will be considered to be vocationally-specific. For example, if numeracy is defined for a particular level of credential as knowledge of basic algebra and a program requires a student to be familiar with calculus, the study of calculus would be considered vocationally-specific.

II.A.3. Generic Skill Outcomes

In the Vision 2000 process, concerns were raised by both internal and external college stakeholders that college curricula tend to be too narrowly focused on specific skills training. Employers ask that

college graduates have the ability to learn additional skills, to work with others, to solve problems and to communicate clearly. These skills are becoming more valued because both the speed and nature of economic change make adaptability a requirement. From the perspective of employers, a focus on generic skills assists them to use both capital and human resources more flexibly in adjusting to the impact of technological change and competitive pressure. (p.36)

In response to these concerns, Vision 2000 recommended a substantial increase in the amount of both general education and generic skills to be included in all programs leading to a college credential. The Establishment Board concurs with this recommendation and its proposal for defining and implementing generic skills follows.

In the context of Vision 2000 and later documents, generic skills have come to be understood as "particular life skills essential for both personal and career success." These practical, portable skills are defined here as:

- literacy
- numeracy
- computer literacy
- interpersonal skills, and
- analytical skills including critical thinking and problem-solving.

The Establishment Board discussed concerns over the inclusion of interpersonal skills. The discussion suggested that there may be some particular difficulties in defining appropriate interpersonal skills and in assessing their attainment.

<i>Should interpersonal skills be included as one of the generic skills?</i>
--

The CSAC Board will establish minimum outcomes for each generic skill. These outcomes will differ by level and type of credential and, where necessary, within a level of credential; for example, minimum outcomes set for one year post-secondary programs for learners with high school courses at the basic level may differ from those established for one year programs where learners have credits predominantly at the general level. Organizations such as the Business and Technician Education Council (BTEC) in the United Kingdom have defined generic, or common, skills under seven headings and list performance criteria for each which become increasingly more sophisticated for each level of credential.⁵

For the most part, the Establishment Board envisions that these generic skills could largely be taught as integrated components of all college courses. Where appropriate, some generic skills may be offered as discrete courses, either within programs or college-wide. Such courses might include computer literacy, mathematics, and business/technical communications. The Board discussed various methods of measuring student attainment of generic skills and concluded that students will demonstrate their mastery of these skills within their program rather than through any system-wide student assessment instrument.

Since generic skills will be expressed in terms of outcomes that must be demonstrated by students, there is no need to further specify that, for example, a set number of program hours must be dedicated to generic skills. How program review will examine the attainment and appropriateness of generic skills is discussed in Section II.B.3 below.

II.A.4. General Education

In presenting a revised mandate for Ontario's colleges, Vision 2000 stated:

Education should give people the opportunity to develop the skills and knowledge they need to adapt to and make a constructive contribution to the world in which they live. Education should enhance students' choices and opportunities, and promote the development of individual potential. It should also assist learners in developing their commitment to social responsibility and care for the communities in which they live, and respect for cultural integrity and self-determination of those whose language and traditions may be different from their own. (p. 27)

... the communications revolution has expanded the horizons of citizenship so that people can and should feel part of local, national and international debates on issues that affect them, their families and their futures -- issues such as poverty, the environment, the Canadian constitution or political change in other parts of the world. To participate actively, they should be aware of the background and context of current events and issues. Helping people to be good citizens, as well as productive workers with marketable skills, should be part of the educational experience at a college. (p. 36)

⁵More information on the BTEC model, including some examples, may be found in Appendix D.

In its deliberations, the Establishment Board affirmed (i) the need for college programs to explicitly include a significant increase in general education, and (ii) that this increase, coupled with the increased emphasis on generic skills, would result in a fundamental change in the orientation of college programs. In addition, the Board noted that increasing general education would serve three important goals. First, general education may enhance citizenship which includes increasing college graduates' understanding of themselves and their society, their ability to function effectively as members of society, and their ability to formulate and to achieve personal goals. Second, while it is important to understand the distinction between general education and generic skills, it is also important to recognize the link between them. The subject matter of general education provides an important context in which generic skills may be developed. A strong argument can be made, for example, that learners' language and reasoning skills are developed through the study of literature, philosophy, sociology, etc. Third, the acquisition of general education may assist learners in pursuing options for lifelong learning, for example, by providing basic knowledge and potential credit toward a (university) degree program.

In describing general education, the Board, however, wanted to avoid too narrow a definition of general education, namely to restrict it to solely the study of traditional liberal arts disciplines. While the Board considers these disciplines to be a necessary component of a college education, they concluded that general education can reasonably include other elements as well.

Having agreed with Vision 2000's recommendation that there be a significant increase in the amount of general education in college programs, the Establishment Board debated different ways to implement it. One proposal discussed would have provided for a general education council to develop specific general education outcomes. However, the Board concluded that developing specific outcomes would be both impractical and undesirable. In particular, agreement on specific general education outcomes would be difficult to achieve; such outcomes would likely have to be stated in fairly narrow terms and, thus, dictate curriculum to the colleges; and, to be effective, general education requires a commitment from a college and its faculty. Such commitment would be more likely to be achieved if major decisions about general education offerings were left to colleges.

Given that the goals of general education are rather broad, the Board felt that they should be expressed not as outcomes but rather as exposure to a variety of subjects outside a person's program of study. The Establishment Board recognizes that expressing general education goals as exposure rather than outcomes is a departure from the basic orientation of Vision 2000. However, the Board concluded that the commitment to general education requires a clear and enforceable rule which can enable colleges to provide learners with

the broadest possible exposure, and allow the greatest opportunity for student choice. Therefore, the Board does not wish to require colleges to identify specific outcomes given that the benefits of general education are many and varied for individual learners.

In the context of the desire to employ a broad notion of general education and to measure this through exposure, rather than specific outcomes, the Establishment Board proposes that CSAC adopt the following:

- (1) General education should constitute 30% of program hours for all college programs within ten years following the establishment of CSAC, and that
 - (a) an interim goal of 20% of program hours should be attained within five years of CSAC's establishment; and
 - (b) after the initial five years, CSAC should develop specific plans for attaining the 30% goal.
- (2) In implementing the 20% interim target,
 - (a) half (i.e. 10% of program hours) should be achieved through exposure to the traditional liberal arts disciplines ; and
 - (b) half (i.e. the remaining 10%) may be achieved through
 - (i) additional liberal arts courses
 - (ii) other offerings outside the specific vocational subjects included in student's program:
 - existing courses from other programs; and/or
 - new offerings which present either content from other programs redesigned and presented for the non-specialist or interdisciplinary offerings which may combine content from various subject areas.

The traditional liberal arts disciplines are generally understood to include natural sciences (such as biology, chemistry, physics), social sciences (such as sociology, psychology, economics, political science) and humanities (such as philosophy, history, literature). None of these disciplines is the focus of an existing college program (except the General Arts and Sciences program). Under the Board's proposal, at least ten percent of program hours would be devoted to one or more of these areas. Whether delivered as single subjects or as part of a survey course, the focus of this requirement is exposure to the traditional liberal arts disciplines. However, where, for example, physics is a

required course for a technology program, the physics course would not be considered to be fulfilling part of the general education requirement for the students in that program.

Offerings outside the student's program could include courses from existing programs. For example, a technology student might undertake courses such as business administration, accounting or small group behavior.

Alternatively, colleges might offer courses that are related to existing programs but which are redesigned and delivered to students from across the college, for example, technological literacy for non-technologists, business practices for non-business students, social issues and policies for non-social service students. As well, inter-disciplinary courses in areas such as environmental studies, applications of new technologies, would also be considered, as would theme-based courses such as marriage and the family or occupational and community health'.

The Establishment Board considered the issue of whether the general education requirement could be met by exposure to either a single area in some depth or a requirement for students to be exposed to a broad range of subject areas. The Board concluded that neither CSAC nor individual colleges should specify either depth or breadth. Rather, students should have the opportunity, to the greatest extent possible, to be exposed to the subjects of their choice.

The Establishment Board feels its proposal has a number of benefits. First, the broad range of offerings (including both traditional and new) will allow colleges greater flexibility than would have resulted from the imposition of a rule specifying only the traditional liberal arts disciplines. This flexibility provides an important opportunity for colleges to utilize existing faculty in new ways and, therefore, might be less disruptive in the short term than a more prescriptive approach. A second benefit of the proposal is that colleges may be able to offer students considerable choice in how their general education requirement is met, including some exposure to other occupational areas. A third important benefit is that colleges may develop new courses which are imaginative in both their content and delivery, and are, therefore, responsive to learners' needs.

Do you agree with the Establishment Board's proposal to define general education as including, but not limited to, the traditional liberal arts subjects? Why or why not?

Given this definition, do you agree with the targets the Establishment Board is proposing for exposure to general education?

In addition, the Establishment Board recognized that one difficulty in specifying a rule in the form of a percentage is the great variation of program hours. Table A in Appendix C shows the differences in 'teaching' hours for the twenty largest post-secondary programs offered by the colleges; 17 of 20 are offered by more than ten colleges. As is apparent, the variation within many programs is significant.⁶ In addition, however, there is also considerable variation among programs defined as, for example, 2 year programs.

Among the implications of these variations is that exposure to general education would exhibit similar variation. For example, being exposed to 20% of 1000 teaching hours is quite different from 20% of 1800 hours, each of which would be the requirement for Early Childhood Education programs at different colleges. Some may consider this variation to be acceptable; others may consider it too great for what are otherwise similar programs.

To the extent that the proposal in its most general form would not address the variations in program hours either within a program (i.e. the same program at different colleges) or between programs (i.e. different programs of the same general length), two alternative means to implement the proposal might be considered.

In one version, the proportion could be applied - on a program by program basis - to the mean number of program hours or, alternatively, to a prescribed minimum number of program hours. This would address the variations within each program, but would not address those differences between programs.

In the second version, the between program variance could be addressed by applying the proportion to the mean (or minimum) program hours for all programs offering the credential (e.g. for all two-year diplomas).

In either version, the amount of general education would be expressed as a number of hours, though this exposure would have been calculated by applying a percentage rule.

What advice should the Establishment Board offer about how to measure exposure?

⁶ There is no assumption that the differences result in significantly different learning outcomes for students. Given that each program is defined as sharing the same basic objectives, it is quite possible that the variation represents differences only in delivery. Presumably, the process of developing system-wide standards will yield information on the extent to which the variation reflects differences in delivery rather than outcomes.

The increase in general education required by the proposed rule can be accomplished by adding general education hours to existing program hours, decreasing the number of hours devoted to the delivery of vocationally-specific content or some combination of the two. A discussion of these three alternatives and some implications in terms of resources, both financial and human, can be found in Section IV.D. The Establishment Board is of the view that in the short term, the proposed changes will likely need to be made within existing funding levels. However, the challenge presented by this limitation is not, in the Board's view, reason to delay or avoid the changes. The Board has concluded that the proposal is not only reasonable and practical, but necessary to implement at the earliest possible time.

The above guideline for general education is, for the most part, intended to pertain only to post-secondary programs. Many adult training programs, particularly some access programs such as OBS (Ontario Basic Skills) and ESL (English as a Second Language), focus almost exclusively on generic skills, which are often taught in the context of general education subjects. For example, in ESL, a unit on government may be used to teach students new vocabulary and may include lessons on verb forms and syntax, as well as providing students with knowledge of Canadian government institutions and processes. At the same time, in some other adult training programs the inclusion of general education may be deemed by CSAC to be neither practical nor appropriate given the duration of the program. However, the Board is of the view that how to include general education in skills-oriented adult training programs should be investigated.

II.B. Program Review

To ensure that system-wide standards are being maintained and that programs leading to a college credential continue to deliver the learning outcomes required by those standards, Vision 2000 recommended that "All programs leading to a college credential should be subject to regular, system-wide program review for the purposes of accreditation." (p.43)

Vision 2000 believed that the following additional benefits would result from regular, system-wide program review:

- program objectives would be regularly revised based on information systematically collected from the colleges;
- the results could provide the basis for initiatives in faculty, staff, and curriculum development;
- an analysis of comparable programs might provide information on the efficiency and effectiveness of alternative delivery modes;

- the introduction of this process would provide the impetus for the delivery of new evaluation measures and instruments, including new means of assessing students, tools for gathering input from students, employers, faculty and administrators, and means to examine instructional processes. (p.45)

The following describes the process for program review envisaged by the CSAC Establishment Board, including the different means of evaluating the attainment and appropriateness of vocationally-specific outcomes, the attainment of generic skills outcomes and the learner's exposure to general education.

II.B.1. Program Review Framework

The Establishment Board is proposing that CSAC's program review process be designed in a manner which will include the following:

- the process will be collaborative and inclusive, with the involvement of internal and external stakeholders, and where necessary, experts external to the college system;
- a variety of indicators of the attainment and appropriateness of the intended outcomes will be utilized in evaluating a program; no single indicator will be a sufficient measure upon which to evaluate a program;
- CSAC will have the authority to use the results of the program review process to determine whether or under what conditions a program should continue to be accredited.

The following stages are proposed for the program review process:

(1) Program councils will develop an **Inventory of Basic Descriptive Program Information**. This information will be submitted by each college for each program it offers and will include the following:

- the specific aims and objectives of a program as defined by each college including additional college-specific vocational outcomes;
- the length of the program, credential awarded and transfer opportunities;
- the structure of the programs (i.e. subjects, work and clinical experience);

- brief descriptions of curriculum including the means by which the generic skill and vocationally-specific outcomes will be delivered and the way in which the general education requirement will be met;
 - the methods of student assessment used in the program; and
 - the results of basic monitoring of the program such as admissions, attrition, and completion.
- (2) CSAC's program councils will develop a series of **common indicators or instruments**. These should include surveys of employers, students, faculty, and administrators. Information would be collected on both the attainment and appropriateness of the learning outcomes established for the program as well as suggestions about changes required to ensure the relevancy of the standards.
- (3) Colleges will submit a **Critical Appraisal** of the program under review prepared by the local program advisory committee supplemented by faculty, students and administration. This document would include statistical information, evaluative comment drawn from several sources and indications of action taken to meet problems identified. In Critical Appraisals submitted to the Council on National Academic Awards (U.K.) the following areas are included:
- a statement of the institution's internal procedures for monitoring and evaluation of the program with relevant reports where it is useful to include them;
 - an evaluation of the extent to which the program has fulfilled its aims and objectives including critical comments on the attainment of program outcomes by students and on methods of student assessment;
 - a report on the changes introduced into the program to improve it, either to build on strengths or remedy weaknesses -- for example, on the fulfillment of any conditions or recommendations from prior program review;
 - discussion of data collected through common instruments developed by the program councils and data contained in the inventory of basic descriptive program information (e.g., progression of student cohorts);
 - information on changes in resource provision affecting the program;
 - proposals for future development.

- (4) A review panel, appointed by the program council, will review the standards documents, the inventory, the common indicators and the critical appraisals.
- (5) The review panel will determine if any follow-up is required, either additional documentary information or a site visit. If no follow-up is necessary, the panel would be able to recommend to the program council the continued accreditation of the program.
- (6) The review panel would prepare its report and submit its recommendations to the program council and each college for any response and discussion prior to a formal decision. Every effort should be made to achieve consensus on possible conditions or recommended changes. In the event of a formal appeal by a college of an accreditation decision, the program council would continue to involve the college and the review panel in a collaborative process to resolve their differences. However, the program council will have the authority to decide appeals; the CSAC Board should not re-adjudicate program review decisions.
- (7) Review panels will recommend one of the following: that the program be unconditionally accredited, that it be conditionally accredited, or that accreditation be withdrawn from the program. Programs accredited without condition will not be reviewed until the next cycle (e.g. five years). Those programs accredited with conditions should be re-evaluated following a set period (e.g. one or two years) as stipulated by the review panel.

If program standards themselves are found to require revision, the review panel could make recommendations to the program council.

Are there other elements of program review which should be included?

What information gathered as part of program review should be published? What considerations are there in terms of the Freedom of Information Act?

In its discussion, the Establishment Board concluded that it would be useful to distinguish between some of the elements of program review particularly relevant to each of vocationally-specific outcomes, generic skill outcomes, and general education.

II.B.2. Vocational Skills

Program-specific vocational outcomes will be reviewed according to the process described above. The review panel will examine the basic inventory, the critical appraisal, and, possibly, assessment instruments and samples of student work in relation to the outcomes identified in the Program Standards Document. As well, using the instruments which have been developed by the program council, perceptions of employers, students, faculty and administrators will be examined regarding both the appropriateness and achievement of the outcomes.

II.B.3. Generic Skill Outcomes

Generic skill outcomes, both those stipulated by CSAC as minimums and those specified by program councils as vocationally-specific, will be reviewed as part of regular program review using the process described above.

The Board discussed the use of gateway tests as a means of measuring students' attainment of generic skills. (As they are used in a number of jurisdictions, gateway tests are required for graduation or to proceed to further education. Such tests measure both skill and knowledge.) The Board concluded that these kinds of instruments are not an appropriate means of measuring student ability, given the many questions which exist concerning (i) test biases, (ii) the validity of testing generic skills apart from a specific context, and (iii) their administrative cost. As well, the Board affirmed the view that the purpose of CSAC's program review is to evaluate the effectiveness of programs, not the performance of individual students.

In the State of New Jersey, a test of general intellectual skills (known as the G.I.S.⁷), which is markedly different in both content and purpose from gateway tests, is given to a sample of students at each post-secondary institution in order to measure the effectiveness of the program/college in terms of student attainment of certain generic skills. The Board decided that a GIS-type instrument might be usefully employed as a measure of one aspect of program effectiveness by testing a sample of graduating students for their attainment of selected generic skills such as gathering, analyzing and presenting information.

Should there be a province-wide assessment of certain generic skills, the purpose of which would be to evaluate program effectiveness, not individual students?

⁷ A description of the New Jersey approach is found in Appendix E.

II.B.4. General Education

As part of program review, general education will be examined to determine whether students have successfully completed a quantity of general education in accordance with the established rule.

On a regular basis, each college would submit a Critical Appraisal of its general education offerings to a General Education Review Panel evaluating, for example, the specific aims and objectives of general education courses at the college, the methods of student assessment used and the college's evaluation of student attainment. As well, using common instruments, perceptions of employers, students, faculty and administration would be gathered.

II.C. Credentials

The authority to define non-degree credentials is an important vehicle by which CSAC can ensure that its goals are met. While Vision 2000 suggested the need for CSAC to redefine credentials offered by the colleges, the Establishment Board has named the major elements to be used to do so. These elements include the vocational and generic skills outcomes (declaration 2) as well as the general education component (declaration 3). There remain, however, several unanswered questions.

As Vision 2000 noted (p.40), college credentials should convey particular information and communicate this clearly to employers, students, educational institutions and the public as a whole. Many have suggested that the current titles of credentials fail to do so, that there is a need to clearly differentiate among the certificates and diplomas of different levels and types of programs (e.g., most non-post-secondary programs award 'certificates', as do one year post-secondary programs and post diploma programs). The issue is not simply the titles used, but the kind of information they should convey. The Establishment Board has not yet discussed this matter in detail.

However, it may be useful to note that in the legislation establishing the New Zealand Qualifications Authority (NZQA), a body responsible for all secondary and post-secondary credentials, the government of New Zealand mandated the NZQA itself with the responsibility for developing a new "framework for qualification" (i.e. the titles of and the relationships between the various credentials).

It can also be noted that in most other jurisdictions, credentials are differentiated by the number of credit hours required, with a minimum number set for each credential.

Given the variation in hours between programs of the same duration (cited in Section II.A, above), it might be difficult to specify a single number of hours for each credential that could be applied across programs. However, the variations in hours within programs (i.e. the same program at different colleges) suggests the need for some consistency. Reducing or eliminating the within-program differences, but not the differences between programs, might raise concern about what features were common to programs granting the same credential.

Some members of the college community would suggest that using program hours to define credentials would fail to recognize the importance of defining programs in terms of 'outcomes' rather than 'time', whether measured as hours or program duration. Others might suggest that while it may be conceptually appropriate to define credentials through program hours, if this definition were other than very general, it would have the practical consequence (or potential) of intruding into the colleges' responsibility for delivery.

Therefore, the reader may wish to address the following questions:

How should CSAC redefine credentials? Should credentials be defined by the duration of programs? by the kinds of outcomes expected? by other features? and if so how?

What kind of information should college credentials convey?

Should credentials distinguish levels (e.g. certificates lead to diplomas which lead to ...)?

Should college credentials differentiate between CSAC-accredited programs and those which are not within CSAC's jurisdiction?

II.D. Assessment and Remediation

The Establishment Board considered assigning to CSAC the responsibility for assessment and remediation to include monitoring, coordinating and evaluating province-wide, post-admission, basic skills assessment and remediation for post-secondary students. In its discussion, the Board considered problems faced by the colleges because of the number of academically under-prepared students enrolling in post-secondary programs, the variety of means by which students are being assessed at individual colleges and the varied approaches to preparatory and remedial programs. As well, the problem of funding for preparatory and remedial programs was

discussed. While recognizing the seriousness of this issue, the Board concluded that such activity does not logically reside within CSAC's mandate to set standards for and accredit college programs. Again, the Board reinforced its view that CSAC should not be involved in determining policies concerning the assessment of individual students. The Board also felt that extending CSAC's mandate, especially in its formative years, might prevent it from accomplishing its primary goals. However, the Board is of the view that a body other than CSAC, but with representation from appropriate stakeholders, should be mandated to examine these issues.

Are there other functions which the Establishment Board should consider for CSAC ?

Section III: Structure and Relationships

This section outlines an organizational structure for carrying out the mandate and functions of CSAC as described in the previous sections of this paper.

III.A. Internal Structure

Standards, and accreditation are subjects of interest to almost everyone in the college community. Students, faculty, support staff, administration, governors, employers, unions, professional associations, regulatory authorities, universities, school boards and community groups each will have their unique perspective on these issues. If CSAC is to do the best possible job, it must take account of the interests of each of these constituencies. Representatives of each must be a part of the CSAC process.

Both standards, and accreditation have to do with the way in which the colleges relate to individuals and organizations outside the college system. Consequently, membership on CSAC bodies must reflect a balance of internal and external interests. Similarly, the internal representation on CSAC bodies must reflect the partnership between management, labour (faculty and support staff) and students.

It is proposed that the composition of the CSAC Board and subsidiary bodies conform to the following guidelines.

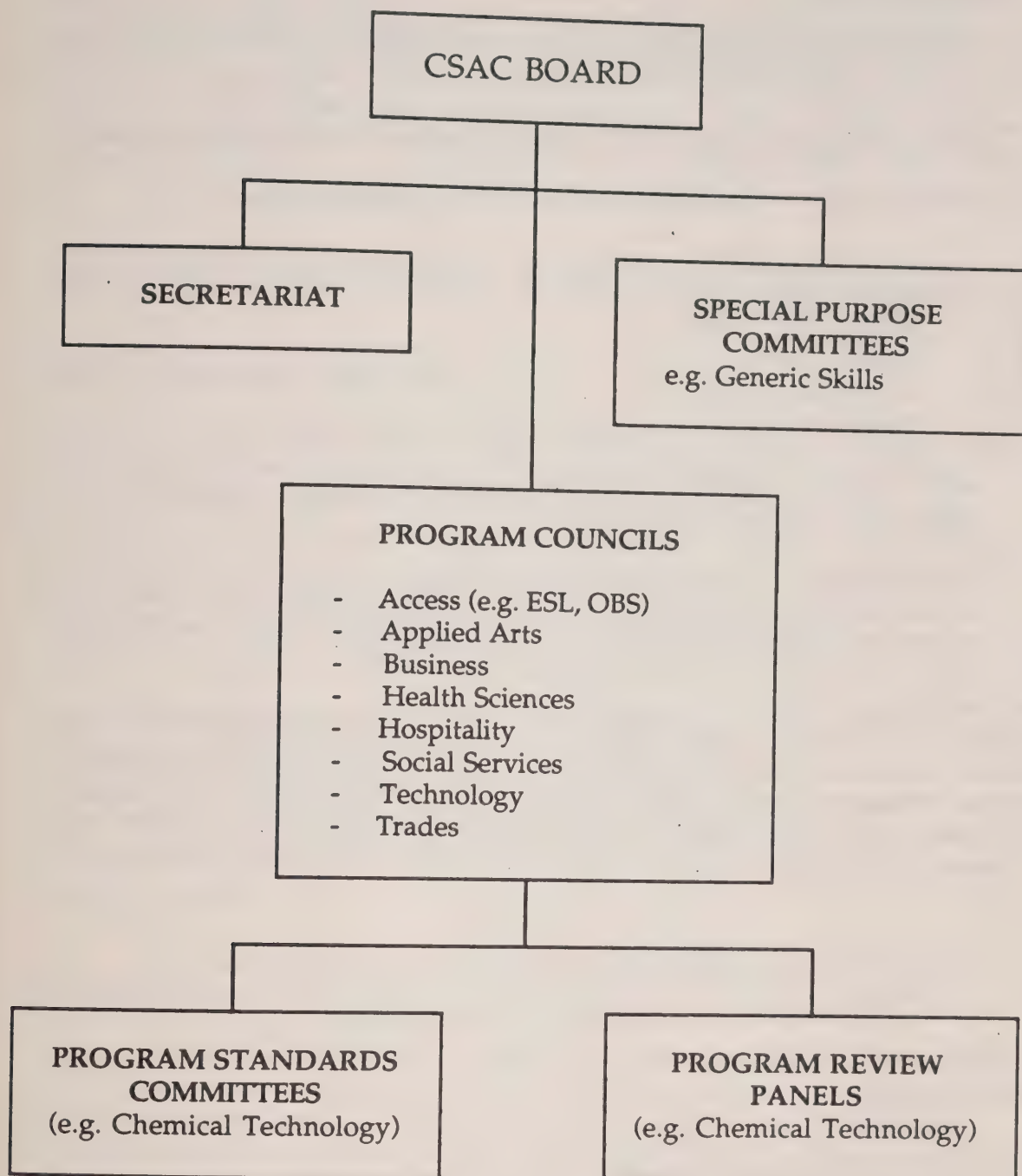
- (a) Half the membership will be internal to the college system and half external.
- (b) Among the internal members, the number of representatives from management will equal the number of representatives from OPSEU (faculty and support staff).
- (c) Organizations representing the constituencies (e.g. OPSEU representing faculty and support staff) will nominate members to the CSAC Board and its subgroups. Appointments to the CSAC Board will be made by the Government of Ontario. Appointments to CSAC subgroups will be made by the CSAC Board.
- (d) Appointments to the CSAC Board and its subgroups should be made with the objective of reflecting the diversity of Ontario's population.
- (e) In accordance with CSAC's arm's length relationship with government, representatives of government and its non-college agencies will be non-voting.

Are these guidelines appropriate? Are there other general guidelines which should apply to the creation of the CSAC Board and its subgroups?

TABLE ONE: PROPOSED MEMBERSHIP ON THE CSAC BOARD

CONSTITUENCY	MEMBERS
Chair	1
<u>Internal Constituencies</u>	
College Boards and Administrators (e.g. Council of Governors, Council of Presidents College Committee on Academic Affairs)	4
Ontario Public Service Employees Union Faculty and Support Staff	4
Students (e.g. Ontario College Student Presidents' Association)	1
<u>External Constituencies</u>	
Employer and Industry Groups (e.g. Canadian Manufacturers' Association)	2
Labour Organizations (e.g. Ontario Federation of Labour)	2
Professional Associations (e.g. Ontario Association for Engineering Technicians and Technologists)	1
Regulatory Bodies (e.g. College of Nurses of Ontario)	1
Universities and School Boards (e.g. Council of Ontario Universities)	2
Community Groups	1
<u>Non-voting Members</u>	
Council of Regents	1
Ministry of Colleges and Universities	1
Ontario Training and Adjustment Board	1
Total	22

CHART ONE: PROPOSED ORGANIZATIONAL STRUCTURE FOR CSAC



Is the proposed structure of CSAC appropriate to its mandate and functions?

The CSAC Board

The major decisions about CSAC's policies, and priorities will be made by the CSAC Board. The responsibilities of the Board will include:

- approving program standards documents and accreditation decisions;
- setting policy and priorities, and developing guidelines for
 - general education
 - generic skills
 - program standards
 - program review
 - accreditation and
 - college credentials;
- monitoring the implementation and impact of program standards, program review and accreditation;
- representing CSAC to other organizations (e.g. government, regulatory bodies) and to the public (e.g. through publication of program standards, accreditation decisions, policies and guidelines).

The Establishment Board gave some consideration to the appropriate size for the CSAC Board. While a small board (10 to 15 members) might be capable of reaching decisions more quickly, in order to secure the necessary diversity of external stakeholders the Board may have to be larger rather than smaller. The 22 member board proposed in Table One might be considered to be a moderate sized board.

*Have the appropriate constituencies been identified?
Are the numbers of representatives appropriate?*

Program Councils

Vision 2000 recommended the creation of a series of program councils. Each program council would assist CSAC in implementing standards, program review and accreditation for a cluster of related programs. A program council will fashion unique solutions to the unique problems for programs in its cluster while seeking consistency in approach among those programs.

Program councils would be composed of persons involved with programs or occupations represented in the cluster. The number of persons on program councils would vary depending on the number and variety of programs within the cluster and the number of external constituencies with a direct interest in the programs. It might be possible to keep membership on many program councils in the range of 10 or 12 members. The CSAC Board should define a maximum number of members (e.g. 18) in order to keep costs within reasonable limits.

Are program councils necessary? Is there a more suitable alternative?

Program Standards Committees

The work of developing specific program standards will be the responsibility of program standards committees. This work will require the cooperative efforts of faculty, program administrators, workers, employers (and others where necessary) who have expert knowledge of the specific program and/or occupation(s) for which the standard is being developed. Committee membership will follow the rule of half internal and half external representatives. Representatives will have to be knowledgeable in the program and/or the occupations for which the program is preparing learners.

While, in principle, a separate program standards committee will be needed for each program standard, there are many instances of closely related programs (such as chemical technician and chemical technology) which might be served by a single committee. Each program standards committee will report to the program council responsible for the cluster to which the program belongs.

Program Review Panels

Three to five years after CSAC has approved a program standard, the program council will create a program review panel to assess the implementation of the standard by colleges. It is expected that review panels will have 4 to 6 members (some internal and some external) with provision for additional members if needed. CSAC will attempt to ensure that those external organizations with the greatest stake in the program are represented on the review panel. There will need to be conflict of interest rules governing the conduct of members with respect to programs at individual colleges with which they may have some affiliation.

Where site visits are required, the members of the review panel might do the visits themselves or they might get other knowledgeable people (including CSAC staff) to do the visits. It is expected that site visit teams will have one to three members depending on the kind of information they have to collect.

What should be the size and composition of review panels?

Special Purpose Committees

One or more special purpose committees may be required in the initial years to assist the CSAC Board to develop specific guidelines, or instruments. For example, an ad hoc committee on generic skills might develop a framework and learning outcomes for generic skills, and possibly oversee the development of an assessment test of generic skills.

Secretariat

The secretariat will provide staff support to the CSAC Board and its subsidiary bodies. The secretariat might initially consist of a director (who would report to the CSAC Board) six professional staff and three support staff.

III.B. External Relationships

CSAC's Location with Respect to Government

CSAC program standards must reflect a balance among the interests of colleges, employers, labour, professional groups, regulatory bodies and government. To be perceived as being truly representative of the college community (broadly defined), CSAC and its subsidiary bodies must be seen to operate independent of any single interest. One way of achieving such independence would be to establish CSAC as an independent government agency (like the Council of Regents or the Ontario Council on University Affairs). CSAC would be funded by government but would control its own budget, employ its own staff and have clear authority with respect to program standards and accreditation.

Alternatively, CSAC might report to the Ontario Council of Regents, thus avoiding increasing the number of independent bodies reporting to the Minister. Such an arrangement could be implemented in a manner which would provide some administrative economies and ensure that CSAC maintains its independence.

What are the most important considerations which should guide the decision about where CSAC should be located?

Checks and Balances: Relationship with MCU and OTAB

Given that CSAC has authority to set standards and accredit programs, CSAC and the Ministry of Colleges and Universities will have to work out ways of coordinating CSAC standards with Ministry funding levels. Similar arrangements will have to be made for non-post-secondary programs -- presumably, with the proposed Ontario Training and Adjustment Board.

With respect to funding, CSAC and MCU might interact in the following way:

- (1) In developing program standards CSAC will work with colleges to estimate the effect of each new standard on the cost of a program. The CSAC Board would not approve a program standard which increases the cost of a program unless there is compelling evidence demonstrating:
 - why the specific standard is necessary, and
 - why the standard will increase the cost of the program.
- (2) Based on 1 above, CSAC and the Ministry will jointly review the funding implications of the program standard. CSAC program standards may provide useful evidence in support of Ministry global funding submissions to Treasury Board.
- (3) In the event that insufficient funding is available to the college system to implement the changes required by a program standard, a number of responses are possible:
 - CSAC could adjust the program standard to match the existing funding level.
 - CSAC could approve the standard, leaving colleges to find the necessary resources from other sources, or to stop offering the program.
 - MCU might introduce an enrolment quota for the program while increasing the per-student funding.

In the event that CSAC reports to the Council of Regents, the above protocol would involve the Council of Regents in any significant discussions or agreements with the Ministry or OTAB.

A related issue is the relationship between the accreditation status and the Ministry's funding of a program. While the final decision with respect to continued funding would rest with the Minister, the expectation would be that a program that fails to receive either conditional or unconditional CSAC accreditation would cease to receive provincial funding.

Consultation with respect to French Language and Native Programs

College programs targeted to specific populations (e.g. Francophones, Natives, the disabled) will present a special challenge to CSAC. Programs with cultural references (e.g. Early Childhood Education, Journalism) may have significantly different objectives for Francophones or Natives than for Anglophones. The CSAC Board will need special advice with respect to programs targeted to specific populations and with respect to the impact of all program standards and program review processes on these populations. CSAC will work closely with the Advisory Council on Francophone Affairs and the Native Education Council to develop appropriate processes to ensure that the unique needs of these two populations are met.

Section IV: Implementation and Costs

Given the number and range of programs under CSAC's jurisdiction, CSAC will have to set priorities and phase its work of developing program standards over several years.

IV.A. Priorities

CSAC might direct its resources initially to developing standards for:

- (1) those large programs which:
 - involve the greatest expenditure of public funds,
 - are offered at the largest number of colleges, and/or
 - enrol the most students;
- (2) programs for which there is an exceptional need or benefit or for which there is a readiness and desire among stakeholders;
- (3) some small programs. (CSAC will want to send the message that quality is important in small and large programs.)

Selecting the largest programs will ensure that expenditures on program standards and review affect the greatest number of college system stakeholders. The 75 college programs which receive the greatest provincial and federal funding account for approximately 75% of total enrolment and funding in college system full-time programs. If CSAC completes 15 program standards in each of the first five years, selecting mostly large programs, within five years, the majority of college students would be in programs where CSAC had approved standards.

The involvement of CSAC in standards setting and program review for the former MSD and MOE programs will require close coordination with OTAB. Among non-post-secondary programs, apprenticeship programs are a special case and will likely require arrangements which differ from other college programs. Apprenticeship programs are different because:

- only a portion of apprentice training is done in colleges,
- standards already exist for many apprentice programs and
- apprentice training comes under the authority of the Apprenticeship and Tradesmans' Qualifications Act.

What considerations other than the enrolments, funding and number of colleges offering a program should guide CSAC in selecting programs for the development of standards?

IV.B. Staging

Table Two shows one possible staging for the development of program standards and for the implementation of program review procedures. In developing the table, a number of assumptions have been made.

- (1) CSAC will commence operation in 1993/4.
- (2) Review of college programs will be most effective, and most consistent with CSAC's mandate, if it is done after colleges have made any changes to their programs to meet CSAC program standards.
- (3) It will probably take one year to develop and validate a CSAC program standard and an additional two to five years for colleges to implement the new standards and to graduate their first class of students from the revised programs.

TABLE TWO: PHASING OF STANDARDS AN PROGRAM REVIEW

YEAR	PROGRAM STANDARDS	PROGRAM REVIEW
1993/4	Standard Setting: 15 Programs	Instrument Development & Pilot Projects
1994/5	"	
1995/6	"	
1996/7	"	
1997/8	"	
1998/9	Standard Updating: 15 Programs	Program Review: 15 Programs
1999/2000	"	"
2000/2001	"	"

IV.C. Pilot Projects

In order to facilitate the implementation of CSAC, the government has provided funds for pilot projects related to provincial program standards, program review, general education and generic skills.

Phase One Projects:

Under the auspices of the CSAC Establishment Board, four projects are being undertaken in 1992. Two research projects, one on general education and one on program review, are intended to assist the Establishment Board and, subsequently CSAC, by collecting comprehensive, system-wide information. The purpose of the general education project is to develop an inventory of policies and practices regarding the delivery of general education, as it has been defined in this paper, in the colleges including a description and analysis of the various ways in which general education is delivered in college programs. An inventory of policies, practices and specific methodologies/tools for program review will be developed through the second project. Also included will be an analysis of the current approaches to program review in the system. Both projects will submit an interim report in May 1992 and a final report in September 1992.

Over the past two years, a working group of Early Childhood Education coordinators has developed a set of professional competencies for the ECE program. A third pilot project will build on the work already done. Since the standards which have been developed focus on vocational skills, there is a need to integrate generic skill outcomes. There is also a need to involve the external community formally in the process of developing standards. Of further interest will be a discussion of the process envisioned for program review including indicators which might be used to determine the extent to which the standards are being met.

The fourth project will focus on program review tools for nursing programs. For many years, nursing programs have operated within the framework of provincial program standards. These standards have recently been revised. As well, in the past, the review of these programs has been conducted by the College of Nurses. This function will now be taken over by CSAC. Therefore, as colleges move to implement the new standards, new assessment tools will be needed. This project will support the development of such tools.

Phase Two Projects:

Phase Two projects will be undertaken in the 1992/93 fiscal year and will provide funding in two areas. In the first, colleges will be asked to submit proposals related to developing system-wide outcomes. Six to ten projects in different program areas will be chosen. The purpose of these projects will be to facilitate the development of standards for college programs under CSAC's jurisdiction and to provide useful feedback on the process of standards development to CSAC during its formative period. The second type of project will respond to the anticipated need for professional development related to the creation of outcome standards, program review, or the delivery of general education or generic skills.

IV.D. Notes on Costs

There are likely to be a variety of costs associated with CSAC, not all of which can be specified in advance. Two major categories, however, can be identified: one-time costs, and ongoing costs.

The one time costs of CSAC, including those associated with its 'start-up', consist of items such as:

- development of a credentials framework (including a generic skills framework and generic skills outcomes)
- initial development of program standards documents
- initial development of program review instruments
- one-time administration costs (e.g. information, initial staffing, equipment).

The ongoing costs of CSAC include:

- ongoing administrative costs (including staff, offices, travel, meetings, liaison with MCU, COR, OTAB, colleges, etc.)
- per diem payments for participants, where required (e.g. review panels)
- periodic revision to standards documents and program review instruments
- program review (e.g. administering instruments such as employer surveys and GIS-type instruments).

Each of these areas will need to be developed in some detail prior to CSAC's implementation. In addition, there may be costs to the colleges as a result of CSAC's operation.⁸ First and foremost among these is the possible increased cost of program delivery. Specifically, to the extent that programs may be lengthened, costs would consequently increase.

⁸ For example, under the program review process, colleges would be required to provide program information and to develop a 'critical appraisal' of the program. It can be assumed that many, if not all, of these activities are currently the practice in the colleges, though not all are used to evaluate each program. Therefore, while there are indeed likely to be costs to the colleges for program review, not all of these are 'new' costs and, in the absence to comprehensive data, it is difficult to estimate the additional expenditures necessary.

In reflecting on the current situation of financial restraint, the Establishment Board considered the implications of a significant increase in general education. There was a general agreement that simply adding general education to existing program hours was not feasible.

An alternative to simply adding general education hours is to substitute general education for some of the hours now devoted to vocationally-specific and generic skill development. While it was unclear how much latitude exists to do so without jeopardizing the attainment of vocational and generic skills, it was suggested that this kind of stipulation - i.e. that increases in general education must be accomplished within existing program hours - was necessary to protect the overall financial viability of the colleges in the current fiscal environment. Doing so, however, would appear to assume either that a significant portion of vocational outcomes could be eliminated from the program or that vocational and generic outcomes could be delivered more efficiently. The Establishment Board's discussion also acknowledged the possible disruption to existing faculty of reducing vocational outcomes in favour of general education, a reality which provided a further rationale for phasing in general education over a sufficient period of time to gain the benefits of faculty retirements and new hirings. An additional possibility available to address these concerns would find a portion of the increase in general education achieved through current hours and a portion provided through an increase in hours. This approach would necessitate some new funding.

Three scenarios are offered in the data presented in Table B (found in Appendix C) showing the effects of implementing a substantial increase in general education hours through (i) no increase in program hours, (ii) all new program hours and (iii) half new hours and half existing hours. Under the (conservative) assumption that only 5% of current program hours would conform to the Establishment Board's definition of general education (the Establishment Board expects more comprehensive data on existing offerings to be provided through the general education pilot project, currently under way), the table provides information on the increases from 5% to 20%, from 20% to 30% and from 5% to 30%.

The table lists nine assumptions concerning both program hours and costs associated with their increase. The increases in annual funding estimated under each of the scenarios are found at the bottom of the table. As shown in the table, the cost of increasing from 5% to 20% would be approximately \$84M if the entire increase were to take the form of additional program hours; and approximately \$38M if one-half of the required hours are additional and one half are derived from existing program hours. The cost of an increase from 20% to 30% - the second stage in the Establishment Board proposal - would be an additional \$77M adding all new hours and \$28M if half the additional hours are 'new'. Finally, the costs of the entire increase, from 5% to 30%, are

shown. With the entire increase simply added on to existing program hours, a cost of approximately \$161M might be incurred, compared to \$66M if only half the required increase were achieved through additional program hours.

It should be noted that these scenarios assume current methods of delivery. However, there may be some scope for achieving cost saving through alternative methods of delivery in vocationally-specific as well as general education courses.

IV.E. Conclusion

The challenge and the changes proposed by Vision 2000 and by this discussion paper are considerable. Ontario needs workers who are highly skilled, knowledgeable and flexible problem solvers; and Ontario needs citizens who are broadly informed about their complex and changing world. Ontario's colleges have a pivotal role to play in serving the workers and residents of the province -- a role which will demand excellence from all participants in the system.

We believe that the proposed College Standards and Accreditation Council can be a focal point for fostering excellence in programming in Ontario colleges. If CSAC is to succeed, it will be because, collectively, we work for its success.

Let us begin by ensuring that the CSAC we create is a CSAC which will meet the needs of both internal and external constituencies to our college system. Toward this end, we welcome your responses to this paper.

Section V: Questions for Responding to Discussion Paper

Section I: Mandate of CSAC

1. Are there other matters which should be included in CSAC's mandate?
2. Do you agree with the Establishment Board's proposal that CSAC should have jurisdiction over all publicly-funded programs? Why or why not?

Section II: Functions of CSAC

3. Should interpersonal skills be included as one of the generic skills?
4. Do you agree with the Establishment Board's proposal to define general education as including, but not limited to, the traditional liberal arts subjects? Why or why not?
5. Given this definition, do you agree with the targets the Establishment Board is proposing for exposure to general education?
6. What advice should the Establishment Board offer about how to measure exposure to general education?
7. Are there other elements of program review which should be included?
8. What information gathered as part of program review should be published? What considerations are there in terms of Freedom of Information Act?
9. Should there be a province-wide assessment of certain generic skills, the purpose of which would be to evaluate program effectiveness, not individual students?
10. How should CSAC redefine credentials? Should credentials be defined by the duration of programs? by the kinds of outcomes expected? by other features? and if so, how?
11. What kind of information should college credentials convey?
12. Should credentials distinguish levels (e.g. certificates lead to diplomas which lead to ...?)

13. Should college credentials differentiate between CSAC-accredited programs and those which are not within CSAC's jurisdiction?
14. Are there other functions apart from standards and program review and accreditation which the Establishment Board should consider for CSAC?

Section III: Structure and Relationships

15. Are the guidelines presented for membership (governing CSAC's internal structure) appropriate? Are there other general guidelines which should apply to the creation of the CSAC Board and its subgroups?
16. Is the proposed structure of CSAC appropriate to its mandate and functions?
17. Have the appropriate constituencies been identified?
Are the number of representatives appropriate?
18. Are program councils necessary? Is there a more suitable alternative?
19. What should be the size and composition of review panels?
20. What are the most important considerations which should guide the decision about where CSAC should be located'?

Section IV: Implementation and Costs

21. What considerations other than the enrolments, funding and number of colleges offering a program should guide CSAC in selecting programs for the development of standards?

Appendix A: Members of CSAC Establishment Board

Co-Chairs:

Richard Johnston
Chair
Ontario Council of Regents

Bernard Shapiro
Deputy Minister
Colleges and Universities

Members:

Ralph Benson
Assistant Deputy Minister
Ministry of Colleges and Universities

Keith McIntyre
Chair, Council of Presidents
President, Mohawk College

Eileen Burrows
President, Local 558
Ontario Public Service Employees Union

Penny Moss*
Ontario Council of Regents

Carol Gooding
Chair, Board of Governors
Sheridan College

Bill Summers
Manager, Program Services
Ministry of Colleges and
Universities

Brian Henderson*
Director, Education and Accreditation
Canadian Dental Association

Ross Traub
Department of MECA
Ontario Institute for Studies in
Education

Cathy Henderson
Vice President, Academic
Sheridan College

Jim Turk
Director of Education
Ontario Federation of Labour

Bill Kuehnbaum
Vice-President
Ontario Public Services
Employees Union

Maurice Yeates
Executive Director
Ontario Council on Graduate
Studies

* Resigned January 1992

Appendix B: CSAC Establishment Board

Terms of Reference

PREAMBLE

In 1988, at the request of the Minister of Colleges and Universities, the Council of Regents initiated a comprehensive, consultative review of the mandate of Ontario's colleges of applied arts and technology. The final report of this review, titled **Vision 2000: Quality and Opportunity**, included, among its recommendations, the following.

There should be a significant increase in the generic skills and general education content of programs leading to a college credential to ensure an equivalence of learning outcomes between these components and specific occupational skills. (Recommendation 2)

There should be system-wide standards for all programs leading to a college credential. Such standards must focus on the learning outcomes expected of graduates from a program. (Recommendation 3)

All programs leading to a college credential should be subject to regular, system-wide program review for the purpose of accreditation. (Recommendation 4)

A college Standards and Accreditation Council (CSAC) should be established, with participation of internal and external stakeholders and with executive authority in the areas of system-wide program standards, review and accreditation. (Recommendation 5)

On April 29th, the 1991 Ontario budget was presented to the Legislature. It noted in part that "education, in all its dimensions, must be at the centre of our efforts to achieve sustainable prosperity," and announced three new initiatives deriving from the recommendations of Vision 2000. The first of these three initiatives was the establishment of a College Standards and Accreditation Council.

PURPOSE

The CSAC Establishment Board has been created for the purpose of recommending to the Minister the mandate, structure, nature, relationships and any other aspects germane to the establishment of a College Standards and Accreditation Council.

MEMBERSHIP

The members of the CSAC Establishment Board will be as follows:

- Chair, Ontario Council of Regents
- Deputy Minister, Ministry of Colleges and Universities
- Council of Regents (two additional members)
- Ministry of Colleges and Universities (two additional members)
- Ontario Public Service Employees' Union (two members)
- Council of Presidents (two members: one college president and one representative of the College Committee on Academic Affairs)
- Council of Governors (one member)
- Ontario Community College Student Presidents' Association (one member)
- Council of Ontario Universities (one member)
- Two external experts in the field of standards and accreditation

The CSAC Establishment Board will be co-chaired by the Chair of the Ontario Council of Regents and the Deputy Minister of Colleges and Universities.

STAFF

The Acting Manager, Policy and Research, of the Council of Regents will serve as secretary to the board.

A secretariat of up to four full time-equivalent professional staff will be made available as needed.

OBJECTIVES

Consistent with purpose of the CSAC Establishment Board, and building on the consensus achieved in the Vision 2000 process, the objectives of the Board are:

1. to identify models for the structure and function of a College Standards and Accreditation Council, and to evaluate the models;
2. to ascertain the degree of consensus among the college system stakeholders (staff, students, employers, unions and professional bodies, the university and secondary sector) concerning the various CSAC models;
3. to oversee evaluative research and/or pilot projects as appropriate concerning program standards, program review, and general education and generic skills;
4. to recommend to the Minister of Colleges and Universities the terms of reference for the College Standards and Accreditation Council including:
 - (a) Mission: Purpose, goals, objectives, and/or governing principles for CSAC;
 - (b) Legislative / regulatory framework: the appropriate (changes to) legislation, regulations and/or policy for the establishment of CSAC;
 - (c) Structure and relationships: Central Council, subsidiary bodies (possibly program councils), standing committees, their relationships to each other and to other bodies (e.g. MCU, COR, boards of governors, ACAATO, professional and regulatory bodies);
 - (d) Membership: constituencies to be represented, method of appointment, terms and conditions of membership;
 - (e) Jurisdiction: the domain of college programs within the purview of CSAC and any subsidiary bodies;
 - (f) Functional responsibilities: (e.g. establishing and maintaining outcome standards, conducting program review, accrediting programs);

- (g) Authority: areas over which CSAC would have executive authority, and areas in which it would play an advisory role, (and to whom it will provide such advice);
 - (h) Accountability: reporting requirements by CSAC (nature, frequency, and to whom) and to CSAC (nature, frequency and by whom);
 - (i) Processes: (to the extent appropriate for terms of reference) for the various functional responsibilities and the various programs within CSAC's jurisdiction, including appeal processes;
 - (j) Funding: source and amount of funding including grants, fees (if any) to institutions, students, associations, and other sources;
 - (k) Other matters as appropriate.
5. to apprise the minister of the advantages and the risks (including, but not limited to, direct and indirect costs) associated with the recommended model in comparison to the other models and the degree of consensus that exists among stakeholders concerning the various CSAC models;
6. to submit a final report by June 1992.

Appendix C: Tables

TABLE A: VARIATIONS IN PROGRAM HOURS

No. of Yrs.	No. of Colleges	Program Title	LOW TEACHING HOURS	MEAN TEACHING HOURS	HIGH TEACHING HOURS	DIFFERENCE AS % OF LOW
1	12	Office Administration Certificate - General	592	728	896	51%
1	15	Nursing Assistant	754	1065	1187	57%
2	18	Business	1253	1402	1600	28%
2	16	General Arts and Science	1024	1356	1600	56%
2	21	Early Childhood Education	953	1152	1815	90%
2	10	Travel & Tourism	1102	1328	1523	38%
2	9	Hotel and Restaurant Management	1277	1482	1560	22%
2	19	Business - Accounting	1215	1423	1664	37%
2	17	Law and Security Administration	1239	1439	1618	31%
2	16	Social Service Worker	897	1062	1254	40%
2	11	Legal Assistant	1111	1289	1455	31%
2	17	Electronics Engineering Technician	1424	1579	1755	23%
3	18	Business Administration	1792	2073	2406	34%
3	15	Business Administration - Accounting	1792	2075	2307	29%
3	6	Graphic Design	1952	2219	2448	25%
3	16	Business Administration - Marketing	1792	2029	2416	35%
3	10	Child and Youth Worker	971	1374	1616	66%
3	6	Computer Programmer Analyst	1763	1996	2368	34%
3	18	Nursing	1998	2246	2548	28%
3	17	Electronics Engineering Technology	2168	2373	2599	20%

1. Source: MCU data from Program Weights Review 1989
2. Excludes program offerings with more than five hours of independent study.

Table B: Estimates of Costs of Increasing General Education from 5 to 30% of Program Hours

Assumptions:

- (1) One year program currently 700 hrs in duration
- (2) Two year programs currently 1400 hrs in duration
- (3) Three year programs currently 2100 hrs in duration
- (4) Full-time Post Secondary Expenditures currently equal \$600M
- (5) Grants and tuition fees would increase by same % to offset additional gen ed. costs
- (6) Faculty salaries account for 50% of operating costs
- (7) Faculty wage bill would increase by same percentage as percentage increase in total program hours
- (8) Percentage increase in non-faculty expenditures would be one-half the percentage increase in program hours.
- (9) Current methods of program delivery remain in place

	One Year Programs			Two Year Programs			Three Year Programs		
	No Change in Program Hrs.	All Add. Gen. Ed. Hrs. are Add-On	One-Half of Add. Gen. Ed. is Add-On	No Change in Program Hrs.	All Add. Gen. Ed. Hrs. are Add-On	One-Half of Add. Gen. Ed. is Add-On	No Change in Program Hrs.	All Add. Gen. Ed. Hrs. are Add-On	One-Half of Add. Gen. Ed. is Add-On
Additional Gen. Ed. Hours	175	250	206	350	500	412	525	750	618
Total Gen. Ed. Hours	210	285	241	420	570	482	630	855	723
Decrease in Non-Gen. Ed. Hours	175	0	103	350	0	206	525	0	309
Additional Program Hours	0	250	103	0	500	206	0	750	309
Total Program Hours	700	950	803	1400	1900	1606	2100	2850	2409
% Increase in Total Program Hours	0	35.7	14.7	0	35.7	14.7	0	35.7	14.7

Total Increase in Grants Required (\$M):

	Total	To move from 5 to 20%	To move from 20 to 30%
No Change in Program Hours	\$0	\$0	\$0
All Additional Gen. Ed. Hours are Add-On	\$161	\$84	\$77
One-Half Gen. Ed. Hours are Add-On	\$66	\$38	\$28

Appendix D:

Generic Skills: The BTEC Model

The Business and Technician Education Council (BTEC) was established in the United Kingdom in 1983 as a registered company with a mandate to accredit employment-related programs offered by colleges, polytechnics and private trainers. Specifically, BTEC is responsible for developing and assuring appropriate standards for credentials, as well as encouraging access and the opportunities to build upon credentials and enhance the ability of students to transfer between programs and institutions.

BTEC awards credentials and accredits programs at eight levels: First Certificates and Diplomas, National Certificates and Diplomas, and Higher National Certificates and Diplomas as well as BTEC Continuing Education Certificates and Diplomas. The different programs and credentials vary in terms of entrance requirements and the number of units required for course completion.¹ Each program consists of a set number of compulsory and elective courses (units). That is, 5 units are required for a First Certificate, 8 for a First Diploma; 10 units are required for a National Certificate, 16 for a National Diploma; and 10 units are required for Higher National Certificate, 16 for a Higher National Diploma. A BTEC First is a prerequisite for a BTEC National; a National is a prerequisite for a Higher National.

Since the Fall of 1986, **common skills** (what we have termed generic skills) have been an integral part of all BTEC First, National, and Higher National credentials. Through a two phase development process, BTEC has achieved the following objectives:

- provided a framework of areas compulsory for each program/credential
- set national standards for each area including outcomes for each common skill by level of credential;
- provided guidance on delivery, assessment and grading of common skills within that competency-based framework.

BTEC has identified the following seven headings as common skills which will appear on each student's "Notification of Performance" (i.e. transcript):

¹ A unit, also known as a module, is defined by BTEC as a short course lasting between six and eighteen weeks. A unit is also defined as requiring 60 hours of learning for a part-time program and 90 hours of learning for a full-time program. (The difference is intended to account for the fact that full-time programs include some 'placement' hours.)

- managing and developing self
- working with and relating to others
- communicating
- managing tasks and solving problems
- applying numeracy
- applying technology
- applying design and creativity

The following chart* lists the common skills and competences.

Common Skill	Competence
Managing and Developing Self	<ol style="list-style-type: none"> 1. Manage own roles and responsibilities 2. Manage own time in achieving objectives 3. Undertakes personal and career development 4. Transfer skills gained to new and changing situations and contexts
Working with and Relating to others	<ol style="list-style-type: none"> 5. Treat others' values, beliefs and opinions with respect 6. Relate to and interact effectively with individuals and groups 7. Work effectively as a member of a team
Communicating	<ol style="list-style-type: none"> 8. Receive and respond to a variety of information 9. Present information in a variety of visual forms 10. Communicate in writing 11. Participate in oral and non-verbal communication
Managing Tasks and Solving Problems	<ol style="list-style-type: none"> 12. Use information sources 13. Deal with a combination of routine and non-routine tasks. 14. Identify and solve routine and non-routine problems
Applying Numeracy	<ol style="list-style-type: none"> 15. Apply numerical skills and techniques
Applying Technology	<ol style="list-style-type: none"> 16. Use a range of technological equipment and systems
Applying Design and Creativity	<ol style="list-style-type: none"> 17. Apply a range of skills and techniques to develop a variety of ideas in the creation of new/modified products, services or situations 18. Use a range of thought processes

*Source: "Common Skills: General Guidelines (Interim Document)," Business and Technician Education Council, 1991, p.10.

BTEC requires that the equivalent of one unit in each year of a program be devoted to these common skills. Procedures for developing, assessing and reporting common skills have been established. As well, BTEC has produced an outcome-based approach to defining and assessing common skills which differs by level of credential.

BTEC encourages an assessment of these skills in the workplace or in realistic work-based simulations. Other methods of assessment include integration of common skills into projects or assignments in all core units as well as the use of a log book which is to be used to provide a formative and summative record of each learner's achievement.

BTEC has developed outcome statements under each heading which are to be developed at each level. These statements are expressed first as a general range statement (a definition of the breadth and limits of applicability of each outcome in respect of all BTEC qualifications); second as a range statement (a definition of the breadth and limits of applicability of each outcome in respect of all BTEC qualifications at each level, i.e. First, National, and Higher National); and, third, as performance criteria (lists of criteria by which the performance of each competence will be measured and which must all be satisfied individually for competence to be demonstrated).

By way of example, the following are the statements and competences provided under common skill "Applying Numeracy"²:

Applying Numeracy

Competence 15 *Apply numerical skills and techniques*

General Range Statement: This competence is about utilizing and applying a range of numerical skills and techniques, e.g.: estimating, calculating, approximating, use of calculators, use of models and recording data.

An understanding and appreciation of the role of such techniques will be developed through their application in a variety of vocational contexts and situation. The use of technology should be introduced where appropriate.

First :

Range Statement: At this level, the learner should be able to use and apply given skills and techniques to arrive at realistic and valid conclusions within the context of adult working life.

² British and Technician Council, "Common Skills: General Guidelines (interim Document)", 1991, pp. 22, 35, 50.

Performance Criteria:

- a. Use and application of numerical techniques identified.
- b. Appropriate techniques selected and applied.
- c. Numerical information correctly interpreted.
- d. Valid conclusions drawn.

National:

Range Statement: At this level, the learner should be developing the ability to identify the need for and to apply numerical skills and techniques within differing situations and tasks. The learner should also demonstrate an ability to evaluate the suitability of the techniques used and solutions derived.

Performance Criteria:

- a. Need for the application of numerical techniques identified;
- b. Appropriate techniques selected and applied;
- c. Numerical information correctly interpreted and valid conclusions drawn;
- d. Inappropriate/inaccurate solutions recognized and appropriate remedial action taken;
- e. Suitability of results evaluated.

Higher National:

Range Statement: The learner will be able to identify the need for numerical skills and techniques within the context of perceived or given problems or tasks. A wide spectrum of numerical skills and techniques will need to be applied to tasks/situations of varying degrees of complexity.

Performance Criteria:

- a. Need for the application of numerical techniques identified
- b. Variety of numerical techniques identified and evaluated;
- c. Selected techniques applied, tested and valid conclusions drawn.
- d. Inappropriate/inaccurate solutions recognized and appropriate remedial action initiated.
- e. Suitability of solution evaluated for accuracy and fitness for purpose.

Appendix E

The New Jersey General Intellectual Skills (GIS) Assessment: A Summary

Definition of General Intellectual Skills

General intellectual skills, as defined by the State of New Jersey, include the ability to find, use and present information and data. They include skills in analysis, problem solving, critical thinking, quantitative reasoning, and written and oral expression.¹

Purpose of GIS

The fundamental purpose of the GIS instrument is to improve educational practices in New Jersey colleges and universities. The instrument is a carefully constructed means of evaluating and reporting the skills of groups of students rather than individuals.² The members of the Student Learning Outcomes Committee (one of four committees of the College Outcomes Evaluation Program) reported that the mode of assessment should not be a multiple-choice test, but should consist of a common set of tasks which would closely resemble what students are required to do in the classroom and at work. (A description of several of the tasks which have been developed can be found below.)

Who Is Tested

A representative sample of 200-300 second year students who have completed between 45 - 70 college credits is selected to take the test at each institution including vocational colleges, county (community) colleges, state colleges and the state university.

How the Test Was Developed

The Student Learning Outcomes Committee first established the skills to be assessed. The following key components were agreed upon and guided the development of the GIS:

¹ Report to The New Jersey Board of Higher Education from The Advisory Committee to The College Outcomes Evaluation Program, October 23, 1987, p.12.

² A total of seven tasks are used for the GIS Assessment. However, since the purpose of GIS is to assess institutional effectiveness rather than each individual, each student is only required to complete one task. The scores of individual students from a single institution are combined and a composite score reported. Over time, each institution will be able to develop a profile of its students' skills in the aggregate.

- (1) it would consist of a series of tasks;
- (2) the focus would be on institutional effectiveness, not the individual student, i.e., that it would not be a gateway test; that only a sample of students would be needed, and that student motivation to participate could be a problem;
- (3) the results would be used to improve the proficiency of students and to provide accountability;
- (4) the ideal situation would be to test first year, second year and graduating students in order to have a measure of the value-added from college programs. However, due to funding pressures only sophomores have been tested as a measure of how proficient students were in general intellectual skills after two years of college. Plans to test a sample of incoming students still exist, possibly in 1993.

Educational Testing Service (ETS) was contracted to provide technical assistance and management in the development of the GIS. Test development took place over two years (1988-89). Tasks were written, revised and rewritten by a group of New Jersey college faculty under the supervision of ETS developers. As well, standards were set and detailed scoring protocols written and revised by the faculty group and ETS.

Almost 5,000 students were involved in two pilot testings. More than 100 New Jersey faculty scored the student responses and provided feedback on the test, the scoring process and the standards. These comments were used to make additional modifications to both the test and the scoring protocol.

ETS and two outside consultants reviewed the results and found that the GIS Assessment was reliable, valid for institutional assessment and that it met all requirements for appropriate test development.

Scoring

The Assessment is scored by New Jersey faculty who are trained to use a method called core scoring, a technique that enables the content and writing skills to be scored separately. A six-point scale is used which rates students for a correct answer which is very well explained and elaborated (6) to an incorrect response (1). The essays are scored a second time on only the writing skills demonstrated.

Reporting

Scores are reported in aggregate form for the state as a whole, by sector and by institution with institutional results presented only within the context of sector results. Each institution also receives a printout of how all questions were answered.

Initial Results

Following the first administration of the New Jersey GIS Assessment in March 1990, the following findings were reported:

- (1) More than one-half of the students tested had demonstrated proficiency (i.e. achieved the level of proficiency expected of a student completing two years of college work) in gathering and presenting information, 25% attained some level of proficiency, and 15% lacked proficiency.
- (2) 44% demonstrated proficiency in analyzing information, 41% exhibited some proficiency and 15% lacked proficiency. In quantitative analysis, 33% demonstrated proficiency, 38% somewhat and 29% lacked proficiency.
- (3) 23% of the students did not demonstrate proficiency in writing.
- (4) The administrative procedure, scoring process, data analysis and feedback to institutions was found to work well.
- (5) The motivation to perform well on the task was satisfactory for a large majority of students completing the assessment. There was some difficulty in getting students to come in for the testing. [It may be noted that the 'institutional' focus creates some problems in administering the exercises, given that students are sampled from all programs. With CSAC's focus on programs, such problems might be minimized.]

Costs

The development costs of the GIS were estimated at one million dollars, of which \$850,000 was paid to Educational Testing Service for its consulting services, in areas such as sampling, piloting, item analysis, etc. A New Jersey official suggests that development costs for a similar set of exercises would be significantly greater "if you were starting from square one". No estimate was offered as to the incremental costs of adding new items, nor of the purchase or licensing costs for use of New Jersey's instruments.

The cost of administering the GIS to 6,500 students in 1991 was estimated at less than \$200,000. Of this, more than half was used to pay 'markers' a per diem (plus travel and expense allowances) for the four days spent on the 6500 exams. It was suggested that this cost is less than might otherwise be the case, given that New Jersey benefits from markers familiar with their scoring protocols from experience with the writing sample of the NJ Basic Skills Assessment Program administered to all incoming students. However, alternatives to such 'per diems' may exist. Additionally, while actual costs for administering the test might be reduced through the use of regular classes,

there are no economies of scale; i.e. nearly all the costs are simply proportional to the number of students tested in New Jersey.

Finally, linking the GIS to "classroom curriculum and paedogogy" has always been an aim of the program. While budgetary problems have made it difficult to fund additional work in this area at the central level, there are some institutional efforts in the early stages.

Sample Tasks

Seven tasks of the 18 which have been developed to date were used in the Spring, 1990 administration of the test. Following is a brief description of each task. All necessary information is provided for students to complete the task.

Teresia and Conland: Students look for significant trends in various tables containing data about two fictitious countries, interpret the data, speculate on reasons for the trends in the data, and then compare the two, basically in terms of their economies.

Cezanne: Students study colour reproductions of this painter and works of two others and are asked to analyze what they see. They are then given information about the development of Cubism and asked to compare and contrast the specific paintings in light of that information.

Lemon Sharks: Students receive a map showing the breeding grounds of a large fish with data concerning its feeding, growth, migratory habits, territoriality, etc. They are then asked to trace the fish's movement and calculate population growth, extrapolating from birth rates and other information. They then receive information about sturgeon and are asked to state the ways in which the purposes and methods of studying the two fish might be similar or different.

Facts: Students receive a list of facts about a country's demographic makeup, the education of its citizens, the consumption patterns of its people, and the attitudes and values shared by the people. Students are then asked to identify relationships among these facts and draw conclusions about the society or culture of the country. Students indicate what additional information would be needed to support their hypotheses about this country's inhabitants.

Theories of the Universe: Students are given information about critical developments within the field of astronomy over a several hundred year period that shook cultures of that time. Students are asked to evaluate the competing theories based upon their scientific merit, and then to account for peoples reactions to these various theories emanating from

the beliefs and values that were current at the time these events were taking place. Students then comment on the effect these changes had on humanity's sense of its place in the universe.

Sorting: Students receive general information about some of the geological processes that shape the world in which we live, and specific information about the layers of sediment formed at the bottom of a fictitious lake. They are asked to draw upon the information given to account for the pattern of sedimentation on the lake bottom.

Indo-Europeans: Students are asked to be historical linguists in this task. They receive information about language families and their origins, and about the importance of a language's core vocabulary in providing clues to the everyday lives of the speakers of that language. Students examine words from the core vocabulary of the original Indo-Europeans, as well as additional clues, and attempt to describe the group's original homeland and lifestyle.

